

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. **(Currently amended)** A device for determining the coagulation state of a sample comprising:

 a sample chamber defining a volume for receiving a sample to be analysed, the sample chamber having a sample chamber major axis;

 at least one particle disposed within the chamber volume wherein the at least one particle comprises at least one material which experiences a force when placed in a magnetic field;

 a means first electromagnet and a second electromagnet for applying a magnetic field to at least part of the chamber volume, the first electromagnet being spaced apart from the second electromagnet by the sample chamber, the first electromagnet having a first electromagnet major axis, the second electromagnet having a second electromagnet major axis, and the first electromagnet major axis and the second electromagnet major axis being parallel to the sample chamber major axis; and

 at least one magnetic field sensor operative to continuously detect the time-dependent movement a response, along the sample chamber major axis, of the at least one particle to the magnetic field throughout its movement within the chamber; and

 a processor configured to determine the coagulation state of the sample based on the continuously detected time-dependent movement response, along the sample chamber major axis, of the at least one particle to the magnetic field throughout its movement within the chamber.

2. **(Previously Presented)** The device of claim 1, wherein the device further comprises a display.

3. **(Previously Presented)** The device of claim 1, wherein the device displays a value that is correlated with a disturbance of hemostasis.

4. **(Previously Presented)** The device of claim 1, wherein the device displays a clotting time and/or an INR value.
5. **(Previously Presented)** The device of claim 1, wherein the sample is blood or plasma.
6. **(Previously Presented)** The device of claim 1, further comprising a filling chamber.
7. **(Previously Presented)** The device of claim 6, further comprising a filling device for filling the chamber.
8. **(Previously Presented)** The device of claim 7, where the filling device comprises a capillary.
9. **(Previously Presented)** The device of claim 1, wherein the material which experiences a force when placed in a magnetic field is ferromagnetic, paramagnetic, or superparamagnetic.
10. **(Previously Presented)** The device of claim 1, where the at least one particle is generally spherical.
11. **(Previously Presented)** The device of claim 1, where the at least one particle has a size in the range of about 2 to about 500 μm .
12. **(Previously Presented)** The device of claim 11, wherein the at least one particle has a size in the range of about 2 to about 20 μm in at least one direction.
13. **(Previously Presented)** The device of claim 1, wherein the at least one particle comprises two or more different materials and wherein at least one material experiences a force when exposed to a magnetic field.
14. **(Previously Presented)** The device of claim 1, wherein more than one particle is disposed in the chamber volume.
15. **(Currently Amended)** The device of claim 1, wherein the magnetic ~~fields~~ field is between about 1 and about 100 mT.
16. **(Previously Presented)** The device of claim 15, wherein the magnetic field is between about 10 and about 50 mT.

17. **(Previously Presented)** The device of claim 16, wherein the magnetic field is between about 10 to about 20 mT.
18. **(Previously Presented)** The device of claim 1, wherein the device further comprises at least one reagent disposed within the chamber prior to introduction of a sample into the device.
19. **(Previously Presented)** The device of claim 18, wherein the reagent is selected from the group consisting of: clotting agents, anti-clotting agents, and reagents suitable for measurement of a disturbance of hemostasis.
20. **(Canceled)**
21. **(Currently Amended)** The device of claim 1 20, wherein each electromagnet produces a constant field and is activated alternatively with a direct current.
22. **(Currently Amended)** The device of claim 1, wherein the ~~magnetic field~~ sensor is a Hall Effect sensor.
23. **(Previously Presented)** The device of claim 1, wherein the device further comprises circuitry for measuring the time elapsed from introduction of a sample until a change in coagulation state is detected.
24. **(Previously Presented)** The device of claim 1, wherein the device further comprises a control means.
25. **(Canceled)**
26. **(Currently Amended)** The device of claim 1 25, wherein the chamber has a volume of less than about 25 μ l.
27. **(Previously Presented)** The device of claim 26, wherein the chamber has a volume less than about 5 μ l.
28. **(Currently Amended)** The device of claim 1 25, wherein the device further comprises a means for heating the chamber.
29. **(Currently Amended)** The device of claim 1 25, wherein the chamber is formed in a disposable support strip which is removable from the device.

30. **(Currently Amended)** A method of determining the coagulation state of a sample comprising:

providing a sample in a sample chamber, the sample chamber having a major axis, and the sample containing at least one particle comprising a material which experiences a force when placed in a magnetic field;

applying a magnetic field to said sample using a first electromagnet and a second electromagnet, the first electromagnet being spaced apart from the second electromagnet by the sample chamber, the first electromagnet having a first electromagnet major axis, the second electromagnet having a second electromagnet major axis, and the first electromagnet major axis and the second electromagnet major axis being parallel to the sample chamber major axis; and

using a magnetic field sensor to continuously detect the time-dependent movement a response, along the sample chamber major axis, of the at least one particle to the magnetic field along its movement to determine the coagulation state of the sample.

31. **(Canceled)**

32. **(Currently Amended)** A The device of claim 1, for determining the coagulation state of a sample comprising:

a chamber defining a volume for receiving a sample to be analysed;

at least one particle disposed within the chamber volume wherein the at least one particle comprises at least one material which experiences a force when placed in a magnetic field and wherein the ratio of the chamber volume to the particle volume is about 30 or greater;

a means for applying a magnetic field to at least part of the chamber volume; and

at least one magnetic field sensor operative to continuously detect the movement of the at least one particle as it moves within the chamber;

and a processor configured to determine the coagulation state of the sample based on the continuously detected time-dependent movement of the at least one particle.

33-40. **(Canceled)**